



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,892	09/24/2003	Jong Sool Park	11037-134-999	5979

24341 7590 03/21/2005

MORGAN, LEWIS & BOCKIUS, LLP.
2 PALO ALTO SQUARE
3000 EL CAMINO REAL
PALO ALTO, CA 94306

EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
----------	--------------

3681

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/670,892	Applicant(s) PARK, JONG SOOL	
	Examiner David D. Le	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/670,892, filed on 24 September 2003. Claims 1, 3-6, and 8-12 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 09/24/03
 - Foreign Priority Document, received on 09/24/03

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1 and 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 1 and 3-5:

- Claim 1 recites, in part, the limitation "... operational elements occupying sequential positions in a lever diagram..." It is unclear how the claimed lever diagram, which is a drawing, as shown in Fig. 3, can be considered as a structural

element that sequentially provides occupational positions for the operational elements of the planetary gear sets. Truly, the operational elements of the planetary gear sets occupy sequential positions in a powertrain housing, not in a lever diagram. It appears that applicant has included a designing tool such as a lever diagram as part of the actual structure of the claimed powertrain.

Furthermore, lines 3-10 of claim 1 thrice recite "a lever diagram". It is unclear whether those are three different lever diagrams.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 6 and 9-12 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 03/054420 A1 to Gumpoltsberger.**

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following art rejections, the examiner will refer to the U. S. Patent Application Publication No. US 2005/0020399 A1, which is the equivalent English version of the WO 03/054420 A1.

Claim 6:

Gumpoltsberger (Figs. 1-2; paragraphs [0020] to [0024]) discloses a multi-step reduction gear comprising:

- A first operational element (i.e., the sun gear of the planetary gear set P1) fixedly connected to a fourth operational element (i.e., one of the planetary gears of the planetary gear set P1), and configured to always receive an input torque;
- A second operational element (i.e., the planetary carrier of the planetary gear set P3) fixedly connected to a ninth operational element (i.e., one of the planetary gear of the planetary gear set P3) and configured to always output an output torque;
- A third operational element (i.e., the planetary carrier of the planetary gear set P2) variably connected to an eighth operational element (i.e., the ring gear of planetary gear set P3) via a second clutch (i.e., clutch 13);
- A sixth operational element (i.e., the ring gear of the planetary gear set P1) variably connected to the seventh operational element (i.e., the sun gear of planetary gear set P2) via a first clutch (i.e., clutch 45); and
- A fifth operational element (i.e., the planetary carrier of the planetary gear set P1) configured to be stationary;
- Wherein the eighth operational element is variably connected to an input shaft (1) via a third clutch (i.e., clutch 16) and is subject to a stopping operation of a first brake (i.e., brake 03), and the seventh operational element is subject to a stopping operation of a second brake (i.e., brake 04).

Claims 9-12:

Gumpoltsberger (Figs. 1-2; paragraphs [0020] to [0024]) discloses a multi-step reduction gear comprising:

- A first planetary gear set (P3) having a first sun gear, a first pinion carrier, and a first ring gear that occupy sequential positions relative to each other;
- A second planetary gear set (P1) having a second sun gear, a second pinion carrier, and a second ring gear that occupy sequential positions relative to each other;
- A third planetary gear set (P2) having a third sun gear, a third pinion carrier, and a third ring gear that occupy sequential positions relative to each other;
- An input shaft (1);
- An output shaft (2);
- Wherein (see Fig. 1):
 - Said first sun gear is connected with said second sun gear;
 - Said first pinion carrier is connected with said third ring gear;
 - Said first ring gear is connected with said third pinion carrier;
 - Said second pinion carrier is always stationary;
 - Said second ring gear is variably connected with said third sun gear;
 - Said input shaft is connected with said first sun gear, said second sun gear, and said third pinion carrier;
 - Said output shaft is connected with said first pinion carrier and said third ring gear;

- Wherein said first and third planetary gear sets are single pinion planetary gear sets (see Fig. 1);
- Wherein the second planetary gear set is a double pinion planetary gear set (see Fig. 1); and
- Wherein said first, second, and third planetary gear sets are arranged in the order of the first, third, and second planetary gear sets.

5. **Claims 9, 10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,669,595 to Raghavan et al.**

Claims 9, 10, and 12:

Raghavan (i.e., Fig. 9a; column 22, line 31 – column 23, line 62) discloses a planetary transmission comprising:

- A first planetary gear set (820) having a first sun gear (822), a first pinion carrier (829), and a first ring gear (824) that occupy sequential positions relative to each other;
- A second planetary gear set (840) having a second sun gear (842), a second pinion carrier (849), and a second ring gear (844) that occupy sequential positions relative to each other;
- A third planetary gear set (830) having a third sun gear (832), a third pinion carrier (839), and a third ring gear (834) that occupy sequential positions relative to each other;

- An input shaft (17);
- An output shaft (19);
- Wherein (see Fig. 9a):
 - Said first sun gear is connected with said second sun gear;
 - Said first pinion carrier is connected with said third ring gear;
 - Said first ring gear is connected with said third pinion carrier;
 - Said second pinion carrier is always stationary;
 - Said second ring gear is variably connected with said third sun gear;
 - Said input shaft is connected with said first sun gear, said second sun gear, and said third pinion carrier;
 - Said output shaft is connected with said first pinion carrier and said third ring gear;
- Wherein said first and third planetary gear sets are single pinion planetary gear sets (see Fig. 9a); and
- Wherein said first, second, and third planetary gear sets are arranged in the order of the first, third, and second planetary gear sets (see Fig. 9a).

Allowable Subject Matter

6. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 1 and 3-5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 3-6, and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 3681

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690 or 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830 or 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
ART UNIT 3681